

1.0 Attendance

1.1 Members :

Borge Christensen (Chairman), Kevin Ryan (Secretary),
Roy Atherton (Chairman of the Comal80 Development Group),
Jens Erik Jensen, Arne Christensen, Erik Jeppesen.

1.2 Observers :

Brendan Lynch, Lars Laursen, Mogens Pelle, Torsten
Schmidt, Bo Jansson, Tom Jacobson, Bengt Nilsson, Erling
Schmidt.

2.0 Introduction.

Borge Christensen opened the meeting and welcomed all
the participants. Kevin Ryan agreed to be secretary. The
rules suggested by Tom Jacobson were adopted, with some
minor amendments. It was agreed that the meeting would
consider the draft definition of Comal80 (syntax and
semantics) which was circulated by ICD. Any contentious
issues would be referred to the Comal80 Development Group.

3.0 Discussion.

3.1 Precedence of Unary Minus.

Kevin Ryan proposed that unary minus should have a
higher priority than that of the normal (or dyadic) minus.
In particular he suggested that -2^2 should evaluate to 4
rather than -4. Borge Christensen and Arne Christensen both
argued that it was normal for exponentiation to take
precedence over unary minus.

REFERRED to the Comal80 Development Group.

3.2 Placing of the Label Statement in the Syntax.

Arne Christensen and others pointed out that the TCD proposal excluded many valid label statements.

DECIDED to restore the original placing of the Label Statement as one of the unstructured statements.

3.3 Integer Type.

TCD proposed to change the names of builtin functions that returned integer values so that e.g. LEN would become LEN#. Erik Jeppesen said that RC had no intention of implementing integer types at all. After some discussion it was suggested that integers were not essential to a Comal80, at least for schools use.

DECIDED to remove all productions relating to integers from the kernel and put them in the recommended extensions.

3.4 Dynamic Strings.

TCD proposed to allow strings to be dynamic, and therefore to make the DIMing of simple strings unnecessary. Most people thought dynamic strings desirable but felt such a major change needed further discussion.

REFERRED to the Comal80 Development Group.

3.5 Logical Expressions.

TCD had proposed a new set of productions for logical expressions. Kevin Ryan said they had done this to exclude as many as possible "nonsense" expressions e.g. DIM a\$(5>4) OF (3<6). Borge Christensen gave an example where such expression might be useful. $I := (obs > 10) + (obs > 20)$. There was no general agreement.

REFERRED to the Comal80 Development Group.

3.6 Specification of Substrings.

It was generally agreed that if a user wished to specify a single character of a string it should be done by e.g. `a$(5:5)`. Allowing the use of `a$(5)` was confusing and potentially dangerous.

DECIDED to delete `<position>` as a substring specifier.

3.7 IMPORT Statement.

Kevin Ryan argued that IMPORT implied a one-way movement which is incorrect. TCD were proposing the use of the word SHARE instead. It was pointed out that this keyword had been GLOBAL originally and had recently been changed to IMPORT. Most people felt it should remain unchanged. However the semantics of IMPORT/SHARE would await a full discussion on scope and binding rules.

REFERRED to the Comal80 Development Group.

3.8 END and STOP Statements.

There was some disagreement as to the effect of these two statements, particularly concerning the resumption of a program after it had reached a STOP or END statement. No changes were agreed.

REFERRED to the Comal80 Development Group.

3.9 The Short Forms of IF, WHILE, FOR and REPEAT.

Kevin Ryan said that TCD were proposing that a short REPEAT be added to the kernel, for the sake of completeness. Mogens Pelle proposed that ALL short forms be removed from the kernel.

(At this point Borge Christensen gave the chair to Tom Jacobson, as he Borge Christensen, felt himself too involved in this issue to be an impartial chairman.)

Kevin Ryan summarised the various proposals. The educators were generally in favour of short forms being allowed. After some discussion it was clear that there were two main options.

(a) Have ALL short forms in the kernel.

(b) Have ALL short forms in the Recommended Extensions. Only Mogens Felle favoured option (b) but as Metanik felt very strongly on this it was :

REFERRED to the Comal80 Development Group.

3.10 EXEC Keyword.

This had been put in Comal originally as a replacement for GOSUB. Some members felt it should now be dropped altogether, others felt it should remain an option in the kernel. Arne Christensen and Mogens Felle pointed out the inconsistency of having parentheses () obligatory on some commands, but having them optional or even forbidden on others. It was agreed to leave the kernel as it is for now but the general question of the differences in syntax between user and system procedure calls was :

REFERRED to the Comal80 Standardisation Group.

The meeting was adjourned and resumed on the morning of Tuesday 1st of March.

3.11 Characters Permitted in Identifiers.

The question was whether underscore _ or some other character should be specified in the kernel, as some terminals might not have the underscore.

DECIDED that the kernel would specify underscore as a permitted character in identifiers but with the addition of a note saying that where no underscore was available another character should be chosen.

3.12 ZONE

There was discussion as to whether this should be a function or a system variable. No change was agreed but the question of ZONE as a system variable was :

REFERRED to the Comal80 Standardisation Group.

The following points were all raised by Arne Christensen while considering the TCD draft Syntax and Semantics.

3.13 CASE Statement

In the event that none of the WHEN clauses was chosen and there was no OTHERWISE clause it was :

DECIDED that this would cause a runtime error.

3.14 REF for Arrays.

Although arrays are at present always passed by reference, to allow for possible changes it was :

DECIDED that REF must be included for arrays in parameter lists.

3.15 Bounds for DIM Statement.

Following an extensive discussion on the semantics of dimensioning the results were :

DECIDED that equal upper and lower bounds are allowed.

DECIDED that strings are initialised to the empty string.

DECIDED that redimensioning of an array causes an error.

The question of rounding in specifying bounds was :

REFERRED to the Comal80 Standardisation Group.

3.16 The IN Operator.

There was a disagreement about whether this returned a TRUE/FALSE value or a position. This question was :

REFERRED to the Comal80 Standardisation Group.

3.17 DIV and MOD.

Arne Christensen gave a summary of the possible options for defining these functions. There was no general agreement and the matter was :

REFERRED to the Comal80 Standardisation Group.

3.18 Prompts in the INPUT Statement.

The TCD draft suggested multiple prompts be allowed in INPUT statements. This was not acceptable to the other representatives so it was :

DECIDED to omit multiple prompts from the kernel.

3.19 OPEN Statement.

The semantic notes on this statement were cleaned up. The question of allowing a READONLY mode was :

REFERRED to the Comal80 Standardisation Group.

3.20 File Operations.

After a discussion of the semantics of WRITE and DELETE it was :

DECIDED that a record number in a write to a sequential file

is an error.

DECIDED an attempt to delete an open file is an error.

3.21 PRINT Statement.

While there was general agreement that it should be possible to PRINT values other than integers, TCD's proposal for formatting reals and strings were :

REFERRED to the Comal80 Standardisation Group.

3.22 Miscellaneous.

After a brief discussion on :

- (a) Definition of Builtin Functions.
- (b) Whether RANDOMISE should be in the kernel.
- (c) The use of parameterless procedures.

all these subjects were :

REFERRED to the Comal80 Standardisation Group.

4.0 Conclusion

The meeting concluded at 12.30 pm, to allow the Development Group to meet in the afternoon.